REMARKS

In response to the above-identified Office Action, Applicants have amended the application and respectfully request reconsideration thereof.

Claims Rejections under 35 U.S.C. §102 and 35 U.S.C. §103

Claims 1 and 2 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,445,702 to Wright (hereinafter referred to as Wright).

Claims 3, 4, 7, and 8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,712,861 to Inoue et al. (hereinafter referred to as Inoue) in view of Wright.

Claims 5 and 6 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Wright.

In this response, claims 1-8 have been cancelled and new claims 9-34 have been added. Applicants respectfully submit that the cancellation of the above-identified claims is not done to overcome the rejections of these claims by the Examiner but rather to expedite the prosecution of the present application and to emphasize and concisely claim the various features of the present invention in the new claims 9-34.

With respect to the new claims 9-34, Applicants respectfully submit that these new claims are neither anticipated nor rendered obvious by Wright and Inoue, either alone or in combination, for the reasons and explanations provided below.

To anticipate a claim, the prior art reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is

found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all the claim limitations. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure." In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants respectfully submit that new claims 9-34 are neither anticipated nor rendered obvious by Wright and/or Inoue for the reasons and explanations set out below.

With respect to the new claim 9, Applicants respectfully submit that Wright does not teach, disclose, or suggest each and every element of claim 9. In particular, Wright does not teach or suggest the following element of claim 9:

> "forming a frame comprising the plurality of information bits, the outer quality metric, and the inner quality metric, wherein the outer quality metric being used for protection of the plurality of information bits and the inner quality metric being used for protection of the at least one group of information bits. "

Wright discloses a method for organizing a plurality of cells into a fixed size frame comprising the steps of: (a) determining an inner coding rate for a first set of data cells; (b) forming a group of codewords by applying an outer code to the first set of data cells; (c) entering the group of codewords row wise into an interleaving array; and (d) applying an inner code column wise to the group of codewords, thereby forming a fixed

size frame body (Wright, Abstract, Col. 1, lines 35-45, Figures 2 and 4). However, Applicants respectfully submit that Wright does not teach, disclose or suggest the above-recited element of claim 9. Specifically, Wright discloses that the method for organizing the plurality of data cells into a fixed size frame for transmission is performed as follows. First, an inner coding rate is determined for the next frame to be formed. A group of codewords are then formed by applying the outer code to a set of data cells such that the number of codewords formed is based on the inner coding rate. A rectangular array is used for interleaving between the codes. To format the array, the group of codewords are placed row wise into the interleaving array, partially filling it. Next, the contents of the array are expanded by applying the inner code to the columns of this array. (Wright, Col. 3, lines 1-22, Figure 2 and 4). Thus, it can be seen that the method that is disclosed by Wright is very different and highly distinguishable from the method as claimed in the new claim 9. In addition, the frame structure and format (the results) generated by the method disclosed in Wright is very different than the frame structure generated by the method of the present invention as claimed in the new claim 9. Specifically, Applicants are unable to find any disclosure or suggestion by Wright regarding a frame that contains an outer quality metric and at least one inner quality metric, as claimed in the new claim 1.

Because Wright does not teach or suggest each and every element of claim 9, Applicants respectfully submit that claim 9 is not anticipated or rendered obvious by Wright. Since the new claims 10-15 depends from claim 9 and includes additional elements/features, these claims are also not anticipated or rendered obvious by Wright.

Inoue discloses a codeword which contains information symbols representing elements of a Galois field, a parity check symbol generated using a certain element of the Galois field, and additional check symbols generated using a polynomial over the Galois field (Inoue, Abstract, Col. 10, lines 54-65). Inoue also discloses that the reliability of corrected codewords is assessed by counting the number of symbols found to be in error, or by counting the number of symbols having at least a certain number of bits in error (Inoue, Abstract, Col. 10, line 66 – Col. 11, line 4). However, Applicants are unable to find any disclosure or suggestion by Inoue regarding a frame having an outer quality metric and an inner quality metric, as described and claimed in the new claim 9 of the present invention. Accordingly, Applicants respectfully submit that claims 9-15 are not anticipated or rendered obvious by Inoue.

Similarly, Applicants respectfully submit that the new claims 16-34 are also not anticipated or rendered obvious by Wright and/or Inoue, either alone or in combination, for the reasons and explanations provided above with respect to the new claim 9.

As discussed above, Wright and Inoue do not disclose, suggest or provide any motivations regarding a frame having the frame structure and content as claimed in the new claims 16-34. Furthermore, Wright and Inoue do not disclose or suggest any method or mechanism for partial recovery of frame information as claimed in the new claims 16-34. Specifically, Wright and Inoue do not teach, suggestion or provide any motivations for recovering a portion of the frame (or a group of information bits contained in a plurality of bits) when the frame has not been correctly received as indicated by the outer quality metric but the respective portion has been correctly received as indicated by the inner quality metric contained in the frame.

Inoue discloses that the reliability of corrected codewords is assessed by counting the number of symbols found to be in error, or by counting the number of symbols having at least a certain number of bits in error (Inoue, Abstract, Col. 10, line 66 – Col. 11, line 4). However, Applicants are unable to find any disclosure or suggestion by Inoue regarding a method in which, when a frame has not been received correctly, a group of information bits in the frame is recovered when an inner quality metric corresponding to this group of information bits indicates that this group of information bits has been received correctly.

Because Inoue and Wright, either alone or in combination, do not teach or suggest all the limitations of the new claims 16-34, Applicants respectfully submit that these claims are not anticipated or rendered obvious by Inoue and/or Wright.

REQUEST FOR ALLOWANCE

In view of the foregoing, Applicants respectfully submit that all pending claims in the present application are in a condition for allowance, which is earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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